COTTON CHATS

FROM

DRAPER COMPANY

SHIPMAN'S
COMMON-SENSE BINDER

PATENTED

JANUARY 19, 1892. APRIL 19, 1904

To open binder, remove the slides from fasteners raise the fasteners to an erect position and then file papers. For punching: lay the papers on covers and mark sheets to correspond with fasteners.

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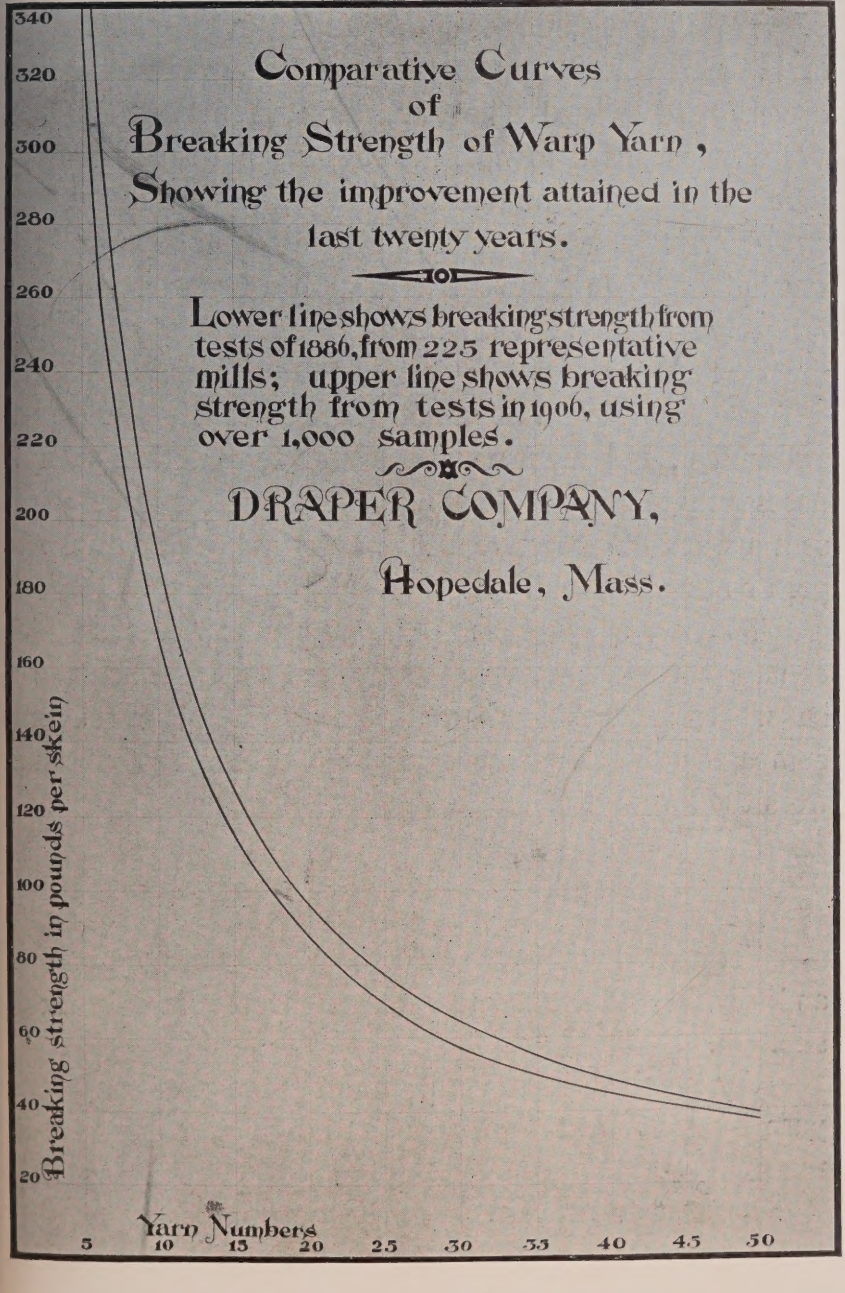
ASA L. SHIPMAN'S SONS
MANUFACTURERS,
NEW YORK.

COTTON CHATS

By the secretary of the
DRAPER COMPANY,
HOPEDALE, MASS.

No. 56 NOVEMBER, 1906.



BREAKING WEIGHT OF YARN.

We have just completed our new breaking-weight table, using the yarn sent on our request from several hundred mills scattered throughout the country. The table which we print gives our old standard, which was figured in 1886, and it also gives the new standard divided into sections. The first new table for warp yarn is arranged from average tests of carded yarn, which averages about Strict Middling in grade. The combed warp table is made up of yarns made from slightly under Good Middling in grade. The soft twisted yarn was selected from yarns which average 3.25 times the square root of the number in twist, the grade of the cotton averaging about Strict Middling. Very soft, or very hard twisted filling, was eliminated from this test. We were surprised to note the strength of the soft twisted yarn in the coarser numbers. The yarns were tested on a Brown Bros.' strength tester run by power at a speed of 190 revolutions. We believe that the power tester breaks considerably stronger than a hand tester, but we do not believe the hand tester a proper device for careful comparative tests.

Those whose yarn does not break up to the new standard with a hand tester need not assume that their yarn is necessarily inferior. We will be glad to test sample yarns sent us, on the power tester, for any mills which wish to get a comparison with their own results.

The new tables are figured from constant curves which contain the majority of points plotted from the actual results. Those wishing to make a very careful or scientific comparison of yarns can compute the result in decimals from the formulæ of the curves, which are as follows:

For carded warp yarn, add the number of yarn to 1900 and divide by the number to get the standard breaking strength.

For combed warp yarn, multiply the number of the yarn by 4, subtract from 2600, and divide the quotient by the number.

For soft twist yarn, multiply the number by 13, subtract from 1900, and divide the quotient by the number.

DRAPER TABLES

OF

BREAKING WEIGHTS OF AMERICAN YARNS

SPUN FROM AMERICAN COTTON.

AVERAGED FROM SAMPLE SKEIN TESTS FROM

SEVERAL HUNDRED AMERICAN MILLS.

120 yards Weight in Grains.	Number of Yarn.	OLD Breaking Weight of Warp Yarn.	NEW Breaking Weight of Warp Yarn.	NEW Breaking Weight Combed Warp.	NEW Breaking Weight Soft Twist Yarn.	120 yards Weight in Grains.	Number of Yarn.	OLD Breaking Weight of Warp Yarn.	NEW Breaking Weight Combed Warp.
1000	1					19.6	51	36.6	47—
500	2					19.2	52	36.1	46
333.3	3	530	634+	863—	620+	18.9	53	35.5	45+
250	4	410	476—	646	462	18.5	54	34.9	44+
200	5	330	381	516	367	18.2	55	34.4	43+
166.7	6	275	318—	429+	304—	17.9	56	33.8	42+
142.9	7	237.6	272+	367+	258+	17.5	57	33.4	42—
125	8	209	238+	321	224+	17.2	58	32.8	41—
111.1	9	186.5	212+	285—	198+	17	59	32.3	40+
100	**10**	168.7	191	256	177	16.7	**60**	31.7	39+
90.9	11	154.1	174—	232+	160—	16.4	61	31.3	39—
83.3	12	142	159+	213—	145+	16.1	62	30.8	38—
76.9	13	131.5	147+	196	133+	15.9	63	30.4	37+
71.4	14	122.8	137—	182—	123—	15.6	64	30	37—
66.7	15	115.1	128—	169+	114—	15.4	65	29.6	36
62.5	16	108.4	120—	158+	106—	15.2	66	29.2	35+
58.8	17	102.5	113—	149—	99—	14.9	67	28.8	35—
55.6	18	97.3	107—	140+	93—	14.7	68	28.5	34+
52.6	19	92.6	101	133—	87	14.5	69	28.2	34—
50	**20**	88.3	96	126	82	14.3	**70**	27.8	33+
47.6	21	83.8	91+	120—	77+	14.1	71	27.4	33—
45.5	22	79.7	87+	114+	73+	13.9	72	27.1	32+
43.5	23	75.9	84—	109+	70—	13.7	73	26.8	32—
41.7	24	72.4	80+	104+	66+	13.5	74	26.5	31+
40	25	69.2	77	100	63	13.3	75	26.2	31—
38.5	26	66.3	74+	96	60+	13.2	76	25.8	30+
37	27	63.6	71+	92+	57+	13	77	25.5	30—
35.7	28	61.3	69—	89—	55—	12.8	78	25.3	29+
34.5	29	59.2	67—	86—	53—	12.7	79	24.9	29—
33.3	**30**	57.3	64+	83—	50+	12.5	**80**	24.6	28+
32.3	31	55.6	62+	80—	48+	12.4	81	24.3	28+
31.3	32	54	60+	77+	46+	12.2	82	24	28—
30.3	33	52.6	59—	75—	45—	12.1	83	23.7	27+
29.4	34	51.2	57—	72+	43—	11.9	84	23.4	27—
28.6	35	50	55+	70+	41+	11.8	85	23.2	27—
27.8	36	48.7	54—	68+	40—	11.6	86	22.8	26+
27	37	47.6	52+	66+	38+	11.5	87	22.6	26—
26.3	38	46.5	51	64+	37	11.4	88	22.4	26—
25.6	39	45.5	50—	63—	36—	11.2	89	22.2	25+
25	**40**	44.6	48+	61	34+	11.1	**90**	22	25—
24.4	41	43.8	47+	59+	33+	11	91	21.7	25—
23.8	42	43	46+	58—	32+	10.9	92	21.5	24+
23.3	43	42.2	45+	56+	31+	10.8	93	21.3	24—
22.7	44	41.4	44+	55+	30+	10.6	94	21.2	24—
22.2	45	40.7	43+	54—	29+	10.5	95	21	23+
21.7	46	40	42+	53—	28+	10.4	96	20.7	23+
21.3	47	39.3	41+	51+	27+	10.3	97	20.5	23—
20.8	48	38.6	41—	50+	27—	10.2	98	20.4	23—
20.4	49	37.9	40—	49+	26—	10.1	99	20.2	22+
20	**50**	37.3	39	48	25	10	**100**	20	22

We shall get out separate cards for these tables which we shall send to all the names on our "Cotton Chat" list.

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The Lancashire Private Cotton Investigation Commission, in their report, refers to several matters of interest to us personally. The following quotations are pertinent:

"*. . . the Rabbeth centrifugal clutch spindle is being rapidly adopted. At one mill there are 57,000 such spindles running in one room. Besides making the frames look extremely neat with all the bobbins at one level, the advantages of the Rabbeth centrifugal clutch over the ordinary gravity spindles are a greater length of yarn on each bobbin, a better grip of the bobbin, and less chance of the yarn breaking in subsequent processes.*"

"The warping is usually done on the Draper warping mill, which is fitted with conedrums to reduce the speed of the beam as the bobbins empty."

" . . . the Northrop loom is more and more being adopted for all single shuttle work."

"A girl brought up in the lonely hill country of Tennessee or Alabama can run twenty Northrop looms in a very short time, as though she had been born and bred in the weaving shed. . . ."

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Those who have seen the cartoon illustrating the man who was sawing wood and had nothing to say may remember another old allusion where the boy said nothing since there was nothing he could say.

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